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19310A MLRS MISSILE NUMBERS BN-122 BN-123 BN-112 ROUND
NUMBERS V-330/PQ-7... (U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATM... D C KELLER SEP 82
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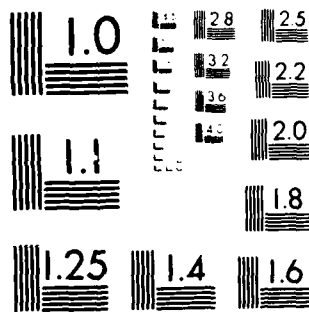
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METEOROLOGICAL DATA REPORT

105100 MRS.
Missile Numbers 00-222, 00-123, 00-112,
Round Numbers V-230/PQ-70, V-231/PQ-71, V-232/PQ-72,
30 September 1982.

by
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Engineer Support Coordinator
Phone Number (805) 687-9528
AFM Number 349-9528

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17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) Approved for public release; distribution unlimited.		
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19310A MLRS, Missile No. BN-122, BN-123, BN-112, Round No. V-330/PQ-70, V-331/PQ-71, V-332/PQ-72 are presented in tabular form.		

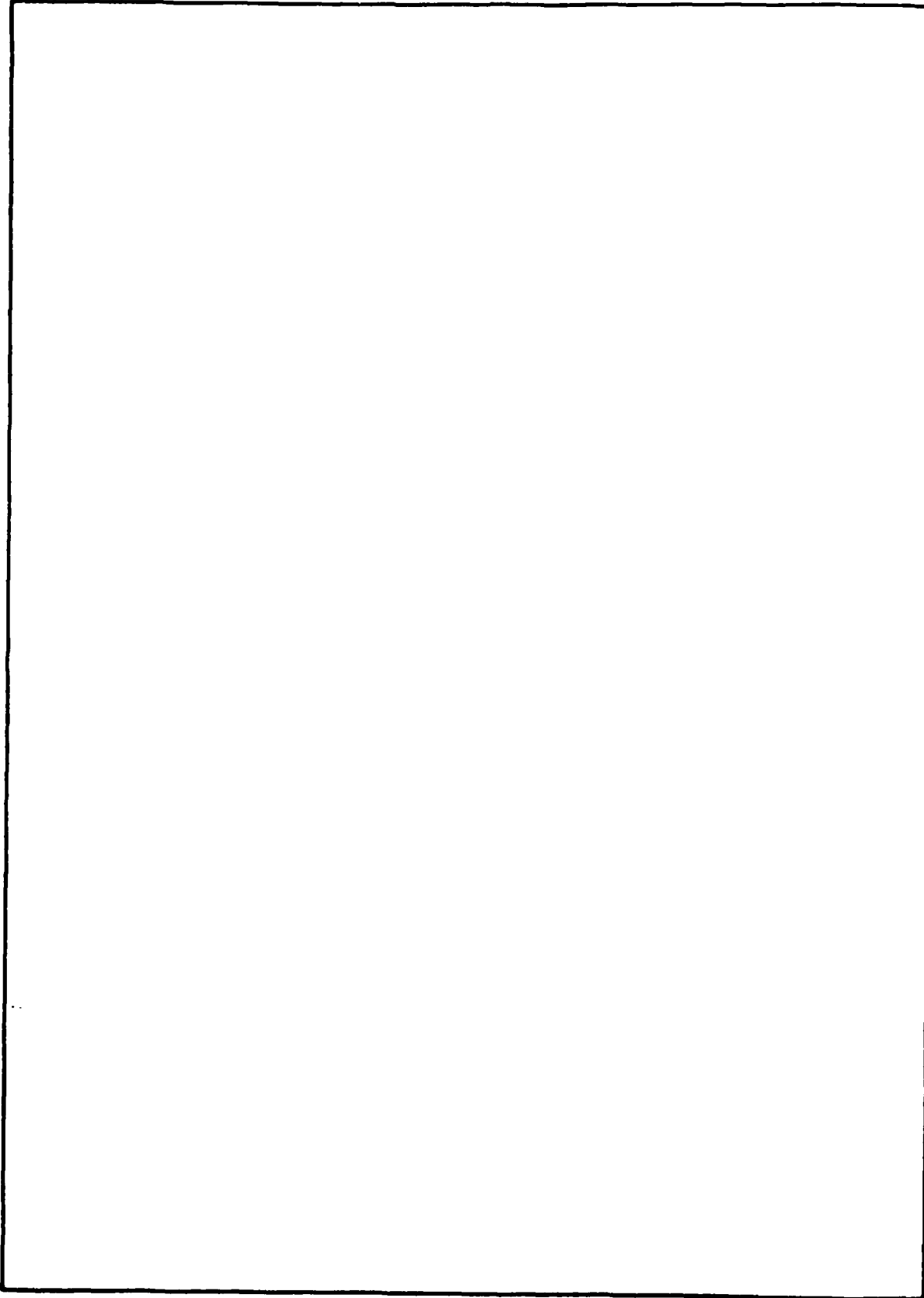
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INTRODUCTION

19310A MLRS, Missile Numbers BN-122, BN-123 and BN-112, Round Numbers V-330/PQ-70 V-331/PQ-71 and V-332/PQ-72, were launched from Brillo, White Sands Missile Range (HSMR), New Mexico, at 0934:56, 0935:00 and 0935:05 MDT, 30 Sep 82. The scheduled launch times were 0930, 0930:04.5 and 0930:09 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations-

a. Surface:

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the Brillo Met Site at T-0 minutes.

(2) Anemometer data were provided from existing tower-mounted anemometers at Brillo. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air-

(1) Low level wind data were obtained from Pilot-balloon observations at:

SITE AND ALTITUDE

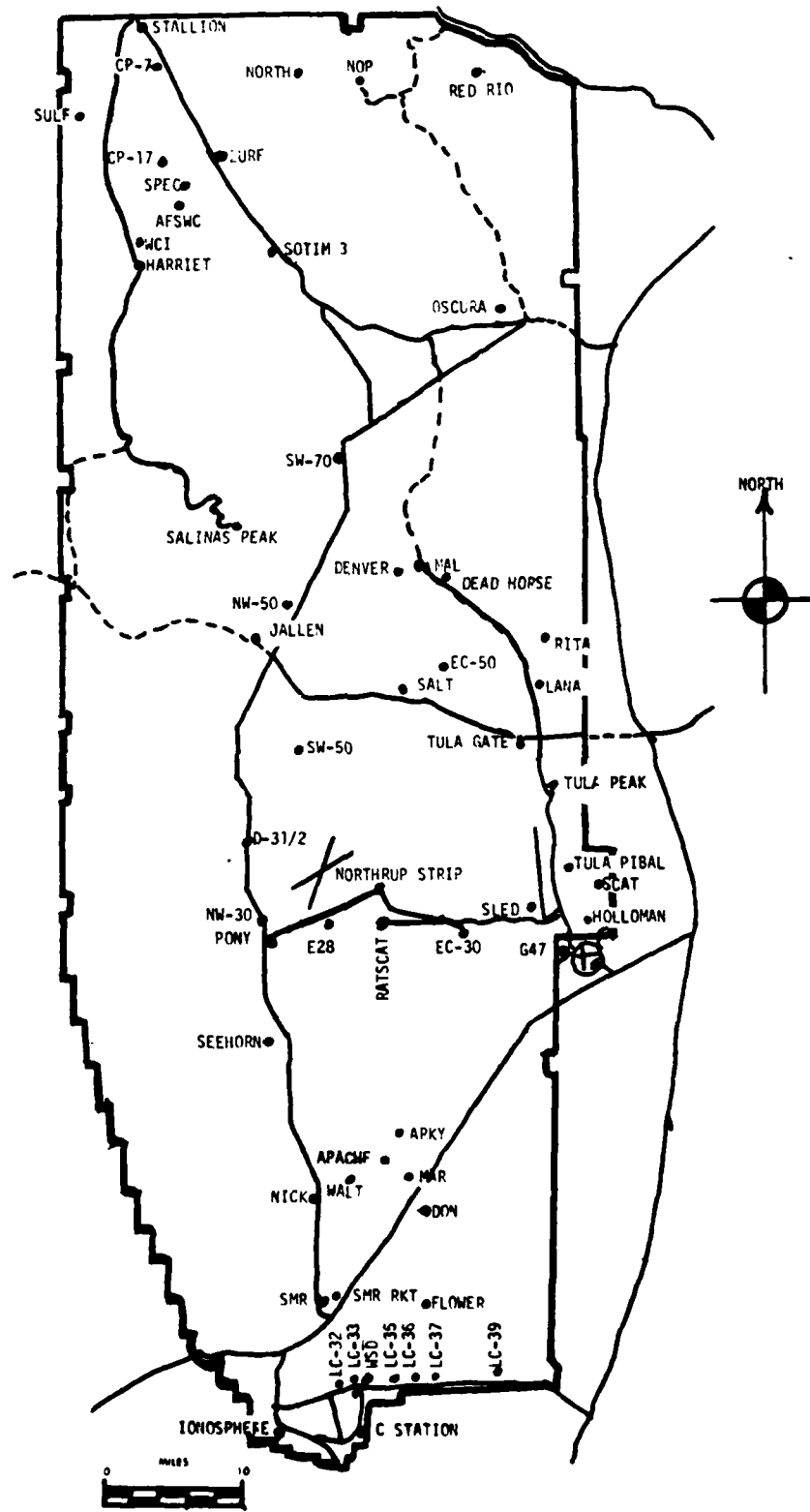
D3 $\frac{1}{2}$	1750 meters
Deadhorse	950 meters

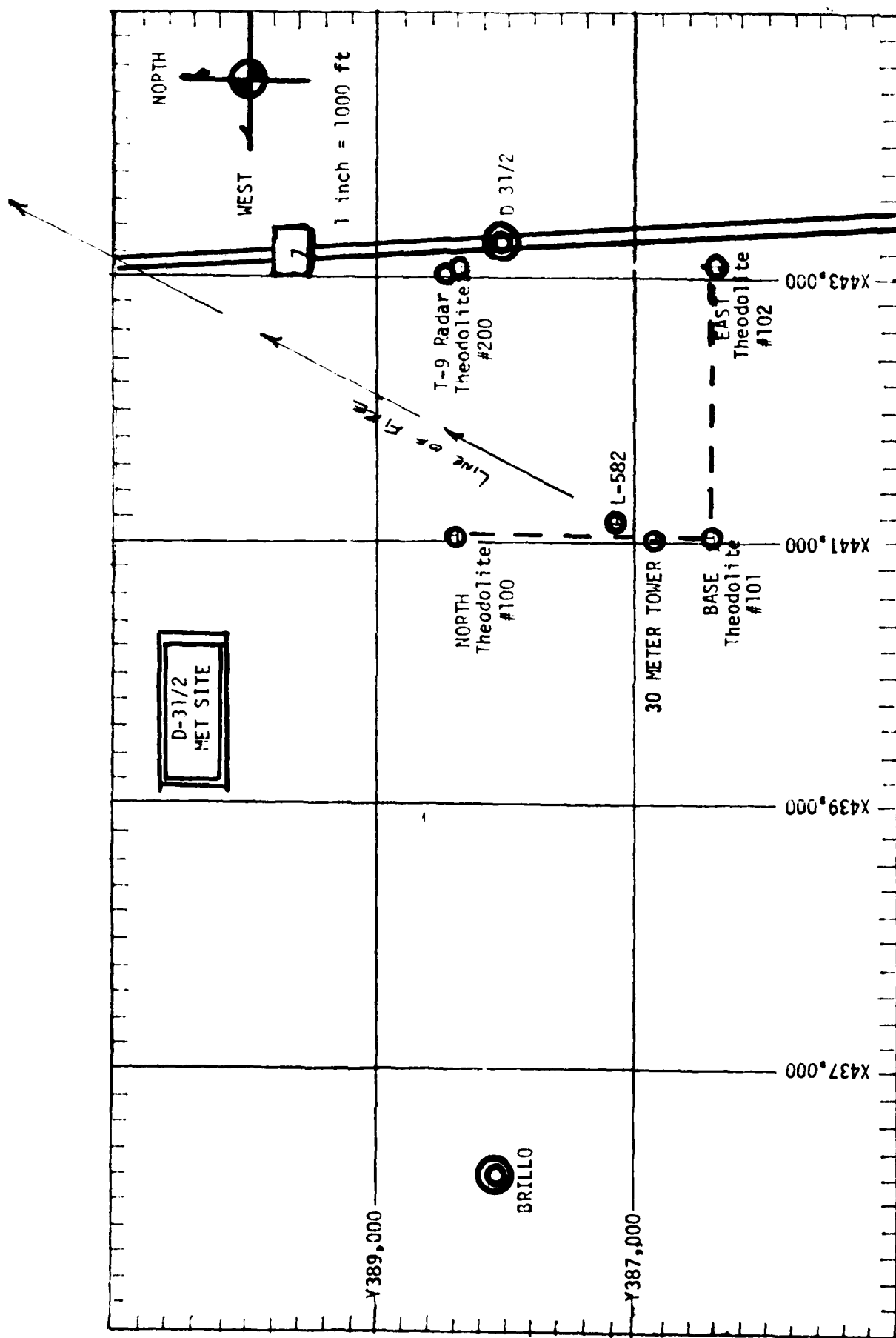
(2) Air structure data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME

E-28	0700 MDT
NW-30	0845 MDT
E-28	0930 MDT

WSMR METEOROLOGICAL SITES





PROJECT SURFACE OBSERVATION

TABLE 1		STATION Brillo					
DATE 30 Sep 82		X= 441,121.6 Y= 387,107.8 H=4005.2					
TIME 0935		WIND					
M D I		SPEED kts					
PRESSURE mbs		TEMPERATURE OF °C		DEW POINT OF °C		DIRECTION degs In	
873.9		18.5		16.7		150	
						06	
						6	

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS
	1st LAYER		2nd LAYER		3rd LAYER		
	AMT	TYPE	HGT	AMT	TYPE	HGT	
R-	4	SC	3500	6	NS	6000	

PSYCHROMETRIC COMPUTATION

TIME:	0835
DRY BULB TEMP.	18.5
WET BULB TEMP.	17.3
WET BULB DEPR.	1.2
DEW POINT	16.7
RELATIVE HUMID.	90

TABLE 2

Anemometer Data - 30 FT. Level of 30 Meter Tower

X= 441,018.71 Y= 386,849.19 H= 4,004.80 (BASE)

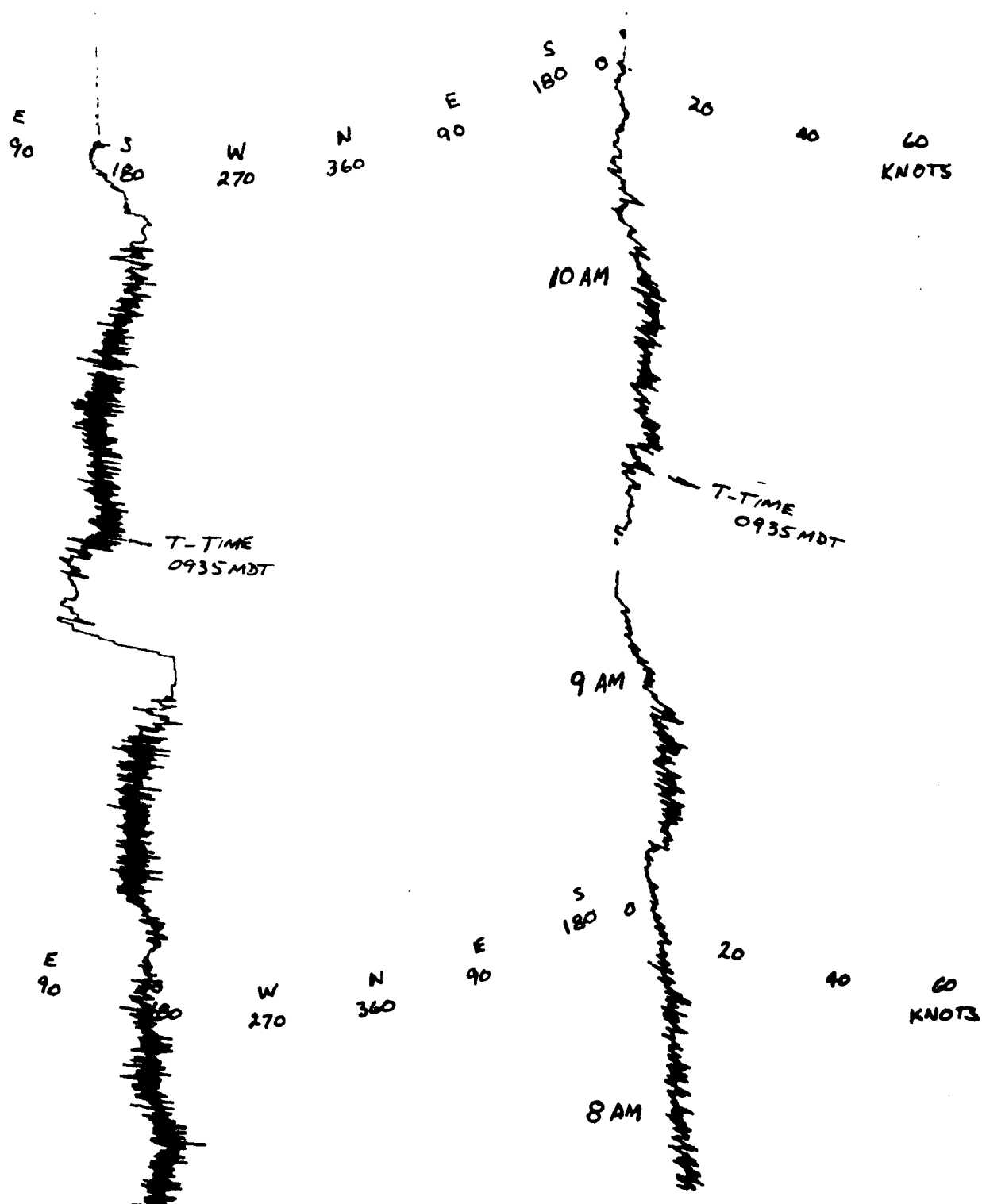


TABLE 3

Anemometer Data - 60 FT. Level of 30 Meter Tower

X= 441,018.71 Y= 386,849.19 H= 4,004.80 (BASE)

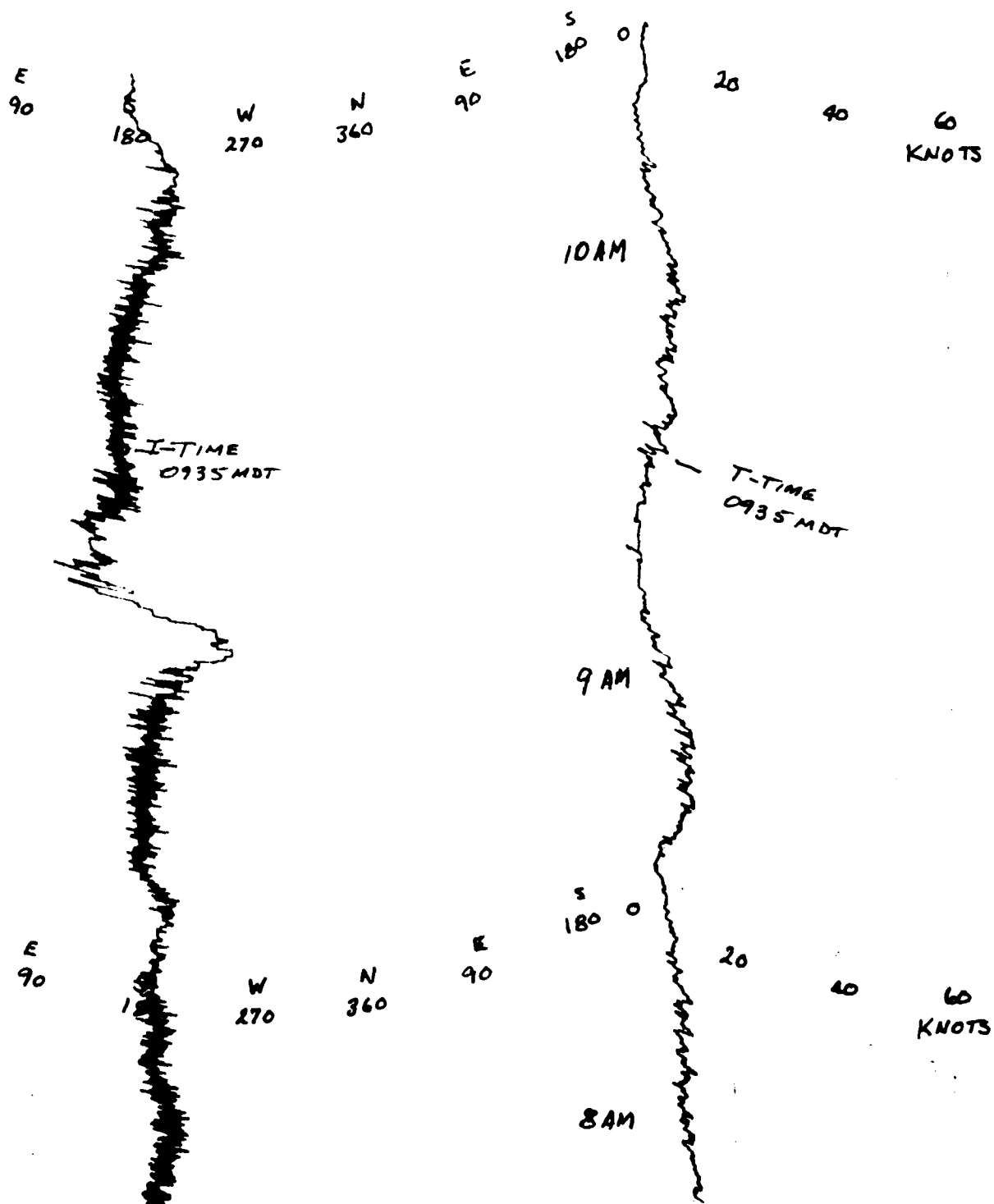
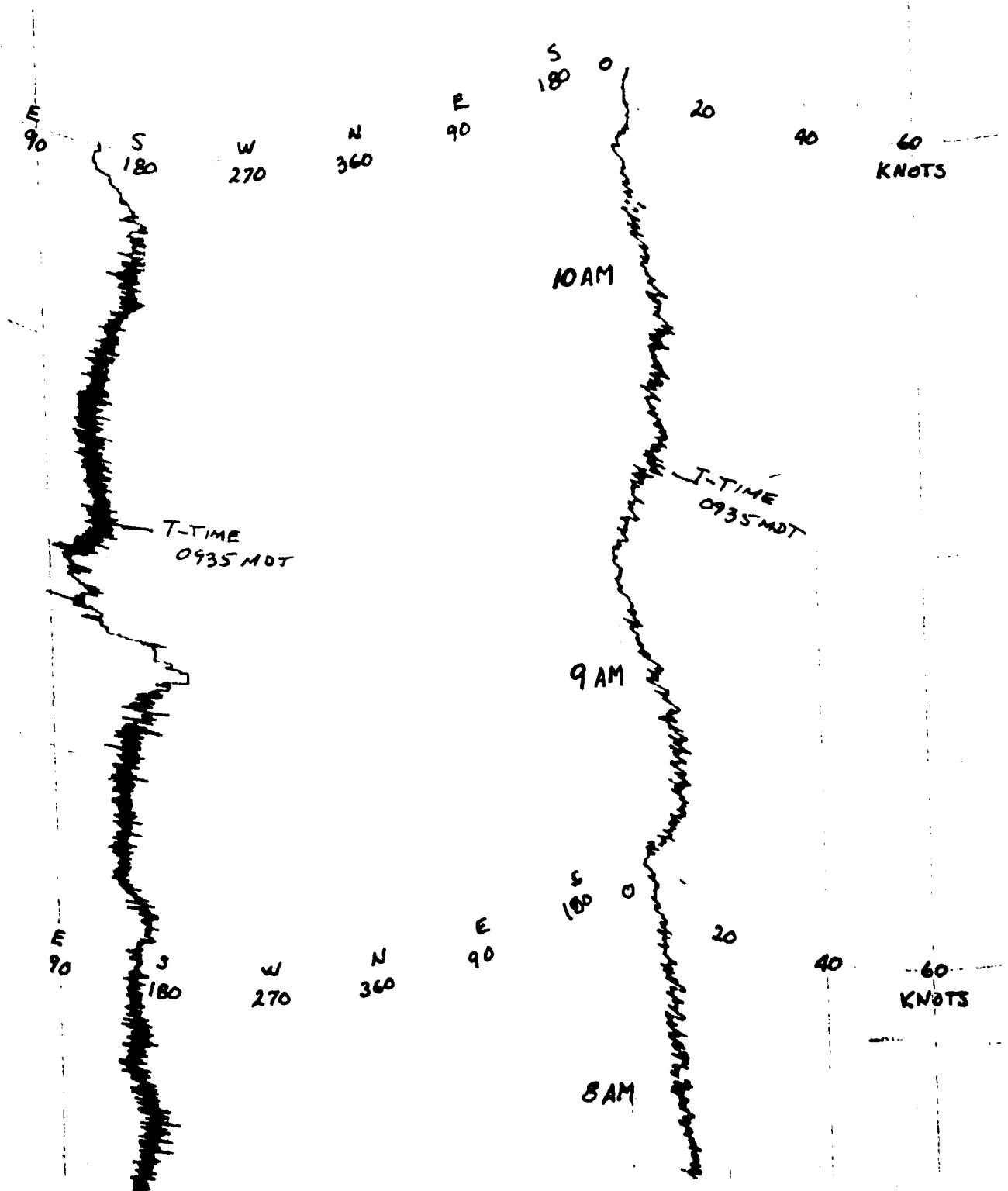


TABLE 4

Anemometer Data - 90 FT Level of 30 Meter tower

X= 441,018.71 Y= 386,849.19 H= 4,004.80 (BASE)



T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 30 September 1982

SITE: D3_{1/2}
 TIME: 0935 MDT
 WSTM COORDINATES:
 X= 441,053.12
 Y= 386,316.94
 H= 4,008.31

SITE: Deadhorse
 TIME 0935 MDT
 WSTM COORDINATES:
 X= 519,982.11
 Y= 490,249.23
 H= 4,133.72

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	150	06
150	158	14
210	159	15
270	161	14
330	163	13
390	168	12
500	186	10
650	194	12
800	189	15
950	187	16
1150	189	16
1350	195	13
1550	213	11
1750	223	19

2000 Lost in clouds

Data obtained from Double Theodolite
 Tracked Pilot-Balloon observation.

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	170	03
150	174	09
210	177	13
270	179	19
330	180	25
390	179	25
500	176	21
650	179	20
800	187	18
950	187	17
1150	Lost in clouds	
1350		
1550		
1750		

2000

Data obtained from Single Theodolite
 Tracked Pilot-Balloon observation.

TABLE 6

AIMING AND T-TIME COMPUTER MET MESSAGES

E-28 0700 MDT

METCM1329064

301300119874

00356006 29490374
 01264019 29540864
 02295021 29360840
 03317023 29110301
 04325030 28920756
 05334027 28570712
 06347021 28170671
 07376020 27740631
 08362036 27370593
 09352046 27120557
 10347048 26940523
 11342045 26690491
 12337047 26210446
 13350050 25660391
 14362051 24990342
 15366067 24200298
 16359086 23390258
 17366104 22570222
 18376114 21810191
 19402100 21070163
 20411082 20530138
 21388079 20110117
 22410063 20200099
 23434025 20910084
 24327019 21010071
 25103016 21390061
 26124021 21490052

NW-30 0845 MDT

METCM1329065

301480122874

00480003 29440874
 01306014 29440864
 02293023 29380840
 03337015 29180801
 04338011 28870756
 05361016 28460712
 06359019 28100670
 07330022 27780631
 08322034 27510593
 09318049 27280557
 10320045 27030523
 11332045 26780491
 12346043 26400446
 13359044 25770392
 14355057 25140343
 15360066 24370299
 16359058 23610259
 17350077 22820224
 18354086 22010192
 19395078 21290164
 20397079 20740140
 21392068 20310119
 22401051 20470100
 23372021 21170085
 24319028 21380073
 25324014 21620062
 26148014 21590053

E-28 0930 MDT

METCM1329064

301550119876

00391006 29320876
 01297015 29170866
 02301023 29030841
 03324016 28780802
 04360011 28430756
 05381008 28070712
 06364014 27680669
 07331022 27370629
 08319035 27250591
 09313047 27040555
 10307055 26820521
 11305056 26600489
 12310059 26210444
 13322052 25620389
 14341056 25000340
 15363064 24200296
 16357070 23440257
 17354089 22740222
 18342097 21840190
 19372098 21120162
 20388101 20620138
 21396074 20200117
 22406050 20250099
 23363021 20680084
 24318032 21170071
 25020013 21430061
 26250016 21350052

STATION ALTITUDE 3912.75 FEET MSL
30 SEP. 82 0700 MDT
ASCENSION NO. 97

SIGNIFICANT LEVEL DATA
2730240097/
LAST-20/CHEMRY

GEODETIC COORDINATES
32.4927 LAT DEG
136.40591 LON DEG

TABLE 7

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
874.4	19.0	16.2	84.0
867.4	19.6	15.5	77.0
861.1	20.7	15.7	73.0
850.0	19.2	13.2	68.0
797.2	15.3	11.3	77.0
774.0	16.1	9.5	65.0
740.2	13.6	4.5	54.0
703.4	10.4	4.8	68.0
700.0	10.6	2.9	59.0
639.4	4.0	-1.4	68.0
616.8	2.0	.2	88.0
592.4	-.7	-1.4	95.0
566.0	-2.6	-2.9	98.0
553.0	-2.6	-2.9	98.0
549.2	-3.4	-3.7	98.0
500.0	-5.6	-5.7	99.0
486.3	-7.7	-8.0	98.0
456.6	-10.8	-11.1	98.0
437.9	-12.2	-12.4	98.0
432.1	-12.9	-13.1	98.0
400.0	-15.8	-16.2	97.0
346.9	-22.5	-24.6	83.0
300.0	-30.8	-34.2	72.0
250.0	-41.0		
235.9	-44.6		
200.0	-52.7		
166.1	-62.0		
150.0	-65.4		
140.5	-68.3		
128.5	-68.9		
109.9	-74.3		
100.0	-73.1		
96.7	-72.2		
95.4	-68.0		
86.1	-62.8		
78.9	-65.1		
70.0	-62.6		
62.3	-60.8		
58.1	-56.9		
50.0	-48.4		

GEODETIC COORDINATES
 32° 03' 27" LAT N
 136° 40' 54" LONG E

SIGNIFICANT LEVEL DATA
 27 SEP 5000
 8753-26/CH/INT

STATION ALTITUDE 3,12.75 FT MSL
 30 SEP. 82 0700 MUF
 ASCENDING 1.0. 97

TABLE 7

CON'T

REL. HUM.
 PERCENT

TEMPERATURE
 AIR TEMPERATURE
 WIND SPEED PERCENT

PRESSURE GEOGRAPHIC
 ALTITUDE
 MILLIBARS MSL FEET

41.1 72727.3 -56.7

STATION ALTITUDE 3412.75 FEET MSL
30 SEP. 62 0700 MDT
ASCENDING NO. 97

UPPER AIR DATA
2730290097
LAST-26/CHECKY

GEODETIC COORDINATES
32.03927 LAT 116
136.40591 LONG 066

TABLE 18

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SOUND SPEED KNOTS	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
3412.7	874.4	19.0	84.0	1.039	668.6	200.0	6.0	1.000313
4000.0	871.7	19.2	81.3	1.030.5	668.8	195.1	6.7	1.000310
4500.0	850.5	20.1	79.0	1.010.0	669.6	190.0	11.3	1.000209
5000.0	841.5	18.6	69.4	998.1	667.6	175.0	16.2	1.000209
5500.0	826.6	17.5	71.4	984.2	665.4	170.4	21.2	1.000204
6000.0	812.1	16.4	74.4	970.0	663.1	175.1	21.1	1.000270
6500.0	797.8	15.3	76.9	957.2	663.8	173.2	22.7	1.000274
7000.0	783.6	15.8	70.0	939.1	664.2	181.4	26.6	1.000206
7500.0	769.7	15.8	63.6	922.8	664.1	182.2	29.8	1.000258
8000.0	750.0	14.8	59.2	910.1	662.7	182.9	30.8	1.000248
8500.0	742.6	13.8	54.8	897.6	661.4	184.0	28.4	1.000240
9000.0	729.2	12.7	58.1	884.9	660.1	185.4	26.8	1.000237
9500.0	716.1	11.5	63.1	872.4	658.8	186.8	25.9	1.000235
10000.0	703.3	10.4	67.6	860.0	657.5	189.2	25.2	1.000232
10500.0	690.4	9.6	60.4	847.3	656.4	191.6	24.5	1.000223
11000.0	677.8	8.3	62.2	835.9	654.8	193.1	22.6	1.000219
11500.0	665.4	6.9	64.0	824.7	653.1	195.2	20.9	1.000215
12000.0	653.2	5.6	65.9	813.7	651.5	211.9	20.2	1.000210
12500.0	641.3	4.2	67.7	802.8	649.9	215.7	21.1	1.000206
13000.0	629.4	3.1	76.7	790.9	648.7	214.8	22.4	1.000205
13500.0	617.7	2.1	87.2	778.9	647.5	207.1	24.6	1.000205
14000.0	606.2	.8	91.0	767.9	646.0	201.9	27.9	1.000201
14500.0	594.8	-4	94.3	757.1	644.5	199.6	32.8	1.000197
15000.0	583.6	-1.3	96.0	745.4	643.4	196.1	37.7	1.000193
15500.0	572.6	-2.1	97.2	733.5	642.4	197.3	42.4	1.000190
16000.0	561.8	-2.6	98.0	720.9	641.9	197.7	45.4	1.000186
16500.0	551.1	-3.0	98.0	708.3	641.4	198.5	47.6	1.000183
17000.0	540.6	-3.8	98.2	696.9	640.4	197.5	48.9	1.000179
17500.0	530.3	-4.2	98.4	684.8	639.9	196.2	49.2	1.000176
18000.0	520.2	-4.7	98.6	672.9	639.3	194.1	47.7	1.000172
18500.0	510.3	-5.1	98.8	661.2	638.8	192.9	46.9	1.000169
19000.0	500.5	-5.6	99.0	649.7	638.2	192.2	46.7	1.000166
19500.0	490.9	-7.0	98.3	640.8	637.4	192.1	46.0	1.000162
20000.0	481.4	-8.2	98.0	631.4	634.9	192.1	45.2	1.000158
20500.0	472.1	-9.2	98.0	621.4	633.7	191.4	43.7	1.000155
21000.0	462.9	-10.1	98.0	611.7	632.5	190.5	43.6	1.000151
21500.0	453.9	-11.0	98.0	601.8	631.4	189.4	45.4	1.000148
22000.0	445.0	-11.7	98.0	591.6	630.6	189.0	47.1	1.000145
22500.0	436.2	-12.4	98.0	581.7	629.7	188.6	48.6	1.000142
23000.0	427.6	-13.3	97.9	572.2	628.6	190.1	49.5	1.000140

STATION ALTITUDE 3912.75 FEET MSL
 30 SEP. 82 0700 MDT
 ASCENSION NO. 97

UPPER AIR DATA
 2730290097
 EAST-2d/CHERRY
 TABLE 8

GEODETIC COORDINATES
 32-89927 LAT DEG
 136-44591 LONG DEG

Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (DEGREES(TN))	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	419.2	-14.0	97.6	562.5	627.7	191.5	50.2	1.000137
24000.0	410.9	-14.8	97.3	553.0	626.7	193.0	50.5	1.000134
24500.0	402.7	-15.5	97.1	543.7	625.8	194.1	49.6	1.000131
25000.0	394.6	-16.4	95.7	534.7	624.7	195.1	48.3	1.000128
25500.0	386.7	-17.4	93.7	525.9	623.5	196.2	47.5	1.000126
26000.0	378.9	-18.4	91.7	517.3	622.3	197.8	47.4	1.000123
26500.0	371.2	-19.3	89.7	508.8	621.1	199.6	48.1	1.000120
27000.0	363.7	-20.3	87.7	500.5	619.9	202.0	49.4	1.000118
27500.0	356.4	-21.2	85.6	492.3	618.6	204.0	50.8	1.000115
28000.0	349.2	-22.2	83.6	484.3	617.4	204.0	52.1	1.000113
28500.0	342.0	-23.3	81.9	476.4	616.0	204.9	53.5	1.000111
29000.0	334.9	-24.5	80.3	468.8	614.5	204.0	54.9	1.000109
29500.0	327.9	-25.7	78.7	461.3	613.0	204.9	56.5	1.000106
30000.0	321.1	-26.9	77.1	454.0	611.5	205.0	58.4	1.000104
30500.0	314.4	-28.1	75.5	446.7	610.0	205.2	60.0	1.000102
31000.0	307.9	-29.3	74.0	439.6	608.5	205.4	61.4	1.000100
31500.0	301.5	-30.5	72.4	432.6	607.0	205.4	64.4	1.000099
32000.0	295.0	-31.7	65.4**	425.5	605.4	205.2	67.6	1.000097
32500.0	288.6	-33.0	56.7**	418.5	603.9	204.5	71.5	1.000095
33000.0	282.4	-34.2	48.1**	411.6	602.3	203.8	75.1	1.000093
33500.0	276.3	-35.4	39.5**	404.8	600.7	203.2	76.9	1.000091
34000.0	270.3	-36.6	30.8**	398.1	599.2	202.7	78.6	1.000089
34500.0	264.5	-37.9	22.2**	391.5	597.6	202.2	80.8	1.000088
35000.0	258.8	-39.1	13.6**	385.1	596.0	201.9	83.1	1.000086
35500.0	253.2	-40.3	5.0**	378.7	594.5	202.0	86.2	1.000084
36000.0	247.6	-41.6		372.5	592.8	202.4	89.1	1.000083
36500.0	242.1	-43.0		366.3	591.0	203.2	91.7	1.000082
37000.0	236.7	-44.4		360.5	589.2	204.0	94.5	1.000080
37500.0	231.3	-45.6		354.1	587.7	204.6	97.5	1.000079
38000.0	226.1	-46.7		347.8	586.3	205.6	101.0	1.000077
38500.0	220.9	-47.8		341.5	584.8	206.3	104.8	1.000076
39000.0	215.9	-49.0		335.4	583.3	207.1	108.6	1.000075
39500.0	210.9	-50.1		329.4	581.8	207.6	112.1	1.000073
40000.0	206.1	-51.2		323.6	580.4	208.4	113.2	1.000072
40500.0	201.4	-52.3		317.8	578.9	209.2	114.0	1.000071
41000.0	196.7	-53.5		312.0	577.3	210.1	114.1	1.000069
41500.0	192.0	-54.7		306.3	575.8	211.0	114.8	1.000068
42000.0	187.5	-55.9		300.7	574.2	212.1	115.9	1.000067
42500.0	183.0	-57.1		295.2	572.6	213.5	116.5	1.000066
43000.0	178.7	-58.3		289.8	571.0	215.1	116.3	1.000065

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3912.75 FEET MSL
30 SEP. 62 0700 MDT
ASCENSION I.O. 97

UPPER AIR DATA
273029009/
EAST-28/CHERRY

GEODEIC COORDINATES
32-4927 LAT DEG
136-40591 LON DEG

TABLE 8

Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	174.5	-59.5		217.4	113.4	1.000063
44000.0	170.3	-60.7		220.0	109.2	1.000062
44500.0	166.3	-61.9		223.1	104.3	1.000061
45000.0	162.2	-62.8		226.2	100.7	1.000060
45500.0	158.3	-63.6		228.9	98.0	1.000059
46000.0	154.4	-64.4		230.3	96.3	1.000057
46500.0	150.6	-65.3		230.6	95.6	1.000056
47000.0	146.9	-66.3		230.2	95.5	1.000055
47500.0	143.3	-67.4		230.0	94.5	1.000054
48000.0	139.7	-68.3		229.4	93.0	1.000053
48500.0	136.2	-68.5		228.1	89.8	1.000052
49000.0	132.8	-68.7		225.9	86.9	1.000050
49500.0	129.5	-68.8		222.7	84.3	1.000049
50000.0	126.2	-69.5		220.3	82.1	1.000048
50500.0	123.0	-70.4		218.1	80.0	1.000047
51000.0	119.9	-71.3		210.3	77.8	1.000046
51500.0	116.9	-72.2		219.0	75.5	1.000045
52000.0	113.9	-73.1		221.2	72.7	1.000044
52500.0	111.0	-73.9		223.4	70.1	1.000043
53000.0	108.2	-74.1		225.3	67.6	1.000042
53500.0	105.4	-73.8		227.4	64.9	1.000041
54000.0	102.7	-73.4		230.1	61.5	1.000040
54500.0	100.1	-73.1		233.9	55.8	1.000039
55000.0	97.5	-72.4		239.5	48.7	1.000038
55500.0	95.1	-71.8		245.5	39.8	1.000036
56000.0	92.7	-70.6		254.3	30.9	1.000035
56500.0	90.5	-69.3		259.9	24.6	1.000034
57000.0	88.2	-68.0		262.9	19.5	1.000033
57500.0	86.1	-67.8		268.5	17.6	1.000032
58000.0	84.0	-67.5		228.3	17.7	1.000031
58500.0	81.9	-67.1		208.0	20.8	1.000030
59000.0	79.9	-66.8		197.4	23.0	1.000030
59500.0	78.0	-66.9		189.9	24.6	1.000029
60000.0	76.1	-66.3		188.0	26.2	1.000028
60500.0	74.2	-65.8		180.7	27.9	1.000028
61000.0	72.4	-65.3		180.6	30.0	1.000027
61500.0	70.6	-64.8		185.2	30.0	1.000026
62000.0	68.9	-64.4		181.0	26.5	1.000025
62500.0	67.3	-62.0		170.2	20.3	1.000025
63000.0	65.6	-61.6		142.0	14.1	1.000024

GEODETIC COORDINATES
32.4927 LAT DEG
136.40591 LON DEG

UPPLR AIR DATA
2730290097
EAST-20/CHERRY
TABLE 8

STATION ALTITUDE 3912.75 FEET ASL
30 SEP. 82 0700 MDT
ASCENSION NO. 97

Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUMID. PERCENT	DENSITY GM/CM ³	SOUND SPEED METERS PER SECOND	WIND DATA DIRECTION (IN) SPEED KNOTS	INDEX OF REFRACTION
63500.0	64.6	-61.2		10.33	567.1	114.7	1.000023
64000.0	62.5	-60.8		102.6	567.6	88.5	1.000023
64500.0	61.0	-59.6		99.5	569.3	79.6	1.000022
65000.0	59.6	-58.3		96.6	571.1	70.9	1.000022
65500.0	58.1	-56.9		93.7	572.8	66.2	1.000021
66000.0	56.8	-57.2		91.6	572.5	62.7	1.000020
66500.0	55.4	-57.5		89.5	572.1	61.3	1.000020
67000.0	54.1	-57.8		87.5	571.7	58.9	1.000019
67500.0	52.8	-58.1		85.6	571.3	54.6	1.000019
68000.0	51.6	-58.4		83.6	570.9	53.2	1.000019
68500.0	50.3	-58.7		81.6	570.5	53.9	1.000018
69000.0	49.1	-58.6		79.8	570.6	60.2	1.000018
69500.0	48.0	-58.4		77.8	571.0	78.6	1.000017
70000.0	46.8	-58.1		75.9	571.3	95.1	1.000017
70500.0	45.7	-57.8		74.0	571.6	107.6	1.000016
71000.0	44.6	-57.6		72.2	572.0	91.4	1.000016
71500.0	43.6	-57.3		70.4	572.3		1.000016
72000.0	42.6	-57.1		68.6	572.7		1.000015
72500.0	41.6	-56.8		66.9	573.0		1.000015

STATION ALTITUDE 3912-75 FEET ASL
 30 SEP. 62 0700 MDI
 ASCENSION NO. 97

MAINTENANCE LEVELS
 27022009,
 EAST-28/CHERRY

GEOMETRIC COORDINATES
 32.49927 LAT DEG
 136.40591 LONG DEG

TABLE 9

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUMID. PERCENT	WIND DATA	
				DIRECTION (DEGREES TRUE)	SPEED KNOTS
850.0	4713.	19.2	68.	176.8	13.4
800.0	6417.	15.5	77.	178.8	22.0
750.0	8217.	14.3	57.	183.4	29.7
700.0	10118.	10.6	59.	189.8	25.1
650.0	12127.	5.2	66.	214.0	20.3
600.0	14256.	.2	93.	200.6	30.5
550.0	16533.	-3.2	90.	190.4	47.8
500.0	19001.	-5.6	99.	192.2	46.7
450.0	21684.	-11.3	98.	189.0	46.2
400.0	24628.	-15.8	97.	194.4	49.2
350.0	27895.	-22.1	84.	204.5	52.0
300.0	31552.	-30.8	72.	205.4	65.1
250.0	35710.	-41.0		202.1	67.8
200.0	40557.	-52.7		209.4	114.0
175.0	43343.	-59.4		217.1	113.8
150.0	46461.	-65.4		230.5	95.6
125.0	50054.	-69.9		219.0	81.3
100.0	54351.	-73.1		233.9	55.9
80.0	58788.	-64.7		198.1	22.8
70.0	61472.	-62.6		184.0	28.9
60.0	64612.	-59.7		74.1	11.7
50.0	68384.	-58.8		54.1	25.4

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

GEODETIC COORDINATES
32-48497 LAT DEG
106-49714 LONG DEG

SIGNIFICANT LEVEL DATA
273022002
HW 30

STATION ALTITUDE 4010.0 FEET MSL
30 SEP 62 0845 MUT
ASCENDING NO. 24

TABLE 10

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	AIR TEMPERATURE DEGREES CELSIUS	REL. HUM. PERCENT
874.4 4010.4	18.5 15.6	83.0
850.0 4111.0	18.8 15.7	82.0
776.4 7357.9	15.5 9.8	69.0
700.0 10217.1	8.8 5.5	80.0
640.0 12639.3	3.9 3.5	96.0
606.2 14086.7	1.6 1.0	96.0
563.5 16016.9	-1.1 -1.5	97.0
500.0 19134.3	-5.5 -0.0	96.0
428.6 23073.5	-11.4 -12.2	94.0
400.0 24806.6	-15.0 -16.5	88.0
338.0 28940.0	-22.7 -25.3	79.0
300.0 31783.5	-29.4 -33.5	67.0
250.0 35987.0	-30.0 -44.6	55.0
228.8 37968.1	-43.9	
200.0 40895.8	-51.4	
160.2 45538.0	-61.5	
150.0 46874.7	-64.0	
128.2 50018.4	-67.8	
114.8 52190.6	-71.2	
101.4 54612.3	-71.3	
100.0 54884.7	-67.6	
95.0 55905.7	-64.8	
90.0 57003.3	-61.5	
76.0 60464.8	-61.3	
70.0 62163.2	-57.9	
63.2 64290.4	-58.0	
57.2 66378.8	-45.5	
50.0 69192.1	-38.6	
48.0 70041.5	-57.7	

GEODETIC COORDINATES
32°48'49" LAT N 46
106°49'14" LONG W 45

UPPER AIR DATA
2730220024

TABLE 11

STATION ALTITUDE 4010.0 FEET MSL
30 SEP 62 0845 MDT
ASCENSION 110. 24

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUMIDITY PERCENT	GEOMETRIC SPEED METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (IN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4010.4	874.4	10.5	63.0	1070.4	667.9	270.0	2.9	1.000310
4500.0	859.4	10.7	62.4	1077.8	668.1	204.7	4.9	1.000306
5000.0	844.3	10.6	61.0	1060.5	666.0	187.4	9.1	1.000300
5500.0	829.4	10.1	70.5	985.4	667.1	181.2	15.6	1.000292
6000.0	814.8	10.3	75.0	970.0	669.2	180.0	16.1	1.000284
6500.0	800.4	10.6	73.0	950.0	665.3	184.2	14.3	1.000276
7000.0	786.3	10.0	70.1	941.0	664.5	183.2	13.0	1.000268
7500.0	772.4	10.2	69.5	927.0	663.5	189.1	12.7	1.000261
8000.0	758.5	14.0	71.5	915.0	662.0	190.4	12.4	1.000256
8500.0	744.9	12.8	73.4	902.0	660.6	194.2	13.0	1.000252
9000.0	731.6	11.7	75.3	889.0	659.2	198.5	13.5	1.000247
9500.0	718.4	10.5	77.2	877.0	657.0	201.0	14.8	1.000242
10000.0	705.5	9.3	70.2	865.0	656.4	203.2	16.1	1.000237
10500.0	692.7	8.2	81.9	853.4	655.1	203.9	16.3	1.000233
11000.0	680.0	7.2	85.2	840.9	653.9	204.4	16.3	1.000229
11500.0	667.6	6.2	84.5	828.5	652.7	199.0	16.6	1.000225
12000.0	655.3	5.2	91.1	816.5	651.5	194.5	17.6	1.000222
12500.0	643.3	4.2	95.1	804.4	650.3	187.7	21.6	1.000218
13000.0	631.4	3.3	96.0	792.0	649.2	183.9	25.7	1.000213
13500.0	619.7	2.5	96.0	779.7	648.2	182.0	29.6	1.000209
14000.0	608.2	1.7	96.0	767.5	647.3	181.5	32.7	1.000204
14500.0	596.8	1.0	96.2	755.2	646.4	181.0	35.3	1.000200
15000.0	585.6	.3	96.5	743.1	645.5	181.0	38.7	1.000196
15500.0	574.6	-.4	96.7	731.1	644.6	180.2	42.3	1.000192
16000.0	563.9	-1.1	97.0	719.5	643.8	178.8	46.0	1.000188
16500.0	553.2	-1.8	96.8	707.6	642.9	178.3	47.9	1.000184
17000.0	542.6	-2.5	96.7	696.0	642.0	178.5	48.2	1.000181
17500.0	532.3	-3.2	96.5	684.7	641.2	179.4	47.3	1.000177
18000.0	522.2	-3.9	96.4	673.5	640.3	180.6	45.1	1.000173
18500.0	512.3	-4.6	96.2	662.5	639.4	182.2	43.1	1.000170
19000.0	502.6	-5.3	96.0	651.7	638.5	184.0	42.6	1.000166
19500.0	492.9	-6.0	95.6	641.0	637.6	187.1	42.5	1.000163
20000.0	483.4	-6.8	95.6	630.4	636.7	189.7	42.7	1.000159
20500.0	474.0	-7.5	95.3	620.0	635.7	191.7	42.6	1.000156
21000.0	464.6	-8.3	95.1	609.8	634.8	193.1	43.1	1.000153
21500.0	455.6	-9.0	94.8	599.8	633.9	195.9	44.2	1.000149
22000.0	447.0	-9.8	94.5	589.9	633.0	194.7	44.6	1.000146
22500.0	438.3	-10.5	94.3	580.2	632.0	195.5	44.5	1.000143
23000.0	429.8	-11.3	94.0	570.6	631.1	196.0	43.7	1.000141
23500.0	421.4	-12.3	92.5	561.6	629.8	198.3	42.8	1.000137

STATION ALTITUDE 4010.40 FEET MSL
30 SEP. 62
ASCENSION IS. 24

UPPER AIR DATA
2730220024
10X 30

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LON DEG

TABLE 11

Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	413.1	-13.3	-14.5	90.8	552.8	628.5	200.0	42.3	1.000134
24500.0	404.0	-14.4	-15.8	89.1	544.2	627.2	202.9	42.0	1.000131
25000.0	396.2	-15.4	-16.9	87.6	535.5	626.0	203.2	42.0	1.000129
25500.0	388.9	-16.3	-18.0	86.5	526.6	624.8	203.0	42.7	1.000126
26000.0	381.0	-17.2	-19.1	85.4	517.9	623.7	200.9	46.1	1.000123
26500.0	373.3	-18.2	-20.1	84.3	509.4	622.5	199.3	49.7	1.000121
27000.0	365.8	-19.1	-21.2	83.2	501.0	621.3	198.7	53.6	1.000118
27500.0	358.4	-20.0	-22.3	82.1	492.7	620.2	198.4	56.8	1.000116
28000.0	351.2	-20.9	-23.3	81.0	484.6	619.0	199.0	57.0	1.000113
28500.0	344.1	-21.9	-24.4	80.0	476.6	617.8	199.0	57.2	1.000111
29000.0	337.2	-22.8	-25.5	78.7	468.8	616.6	200.4	56.8	1.000109
29500.0	330.2	-24.0	-26.9	76.6	461.3	615.1	201.1	56.4	1.000107
30000.0	323.3	-25.2	-28.4	74.5	453.9	613.7	201.0	56.8	1.000105
30500.0	316.6	-26.4	-29.8	72.4	446.7	612.2	202.1	57.2	1.000103
31000.0	310.0	-27.6	-31.3	70.3	439.5	610.7	202.5	57.6	1.000101
31500.0	303.6	-28.7	-32.7	68.2	432.5	609.2	203.0	57.9	1.000099
32000.0	297.2	-29.9	-34.1	66.4	425.4	607.7	203.2	58.4	1.000097
32500.0	290.8	-31.0	-35.4	65.0	418.3	606.3	203.3	58.9	1.000095
33000.0	284.6	-32.2	-36.7	63.5	411.3	604.9	203.1	60.0	1.000093
33500.0	278.5	-33.3	-38.0	62.1	404.4	603.4	202.8	61.1	1.000092
34000.0	272.5	-34.5	-39.4	60.7	397.6	602.0	202.4	62.8	1.000090
34500.0	266.7	-35.6	-40.7	59.2	391.0	600.5	201.9	64.6	1.000088
35000.0	260.9	-36.7	-42.0	57.8	384.4	599.1	201.1	66.2	1.000087
35500.0	255.3	-37.9	-43.3	56.4	378.0	597.6	200.4	67.8	1.000085
36000.0	249.9	-39.0	-44.7	54.6**	371.7	596.1	199.6	69.0	1.000084
36500.0	244.3	-40.3	-46.4	40.8**	365.4	594.5	198.8	69.9	1.000082
37000.0	238.9	-41.5	-53.1	26.9**	359.3	593.0	198.1	70.9	1.000080
37500.0	233.6	-42.7	-57.9	13.0**	353.2	591.4	197.5	72.1	1.000079
38000.0	228.5	-44.2			347.3	589.8	197.1	73.7	1.000077
38500.0	223.3	-45.3			341.5	588.1	196.9	76.4	1.000076
39000.0	218.2	-46.5			335.6	586.5	196.7	79.0	1.000075
39500.0	213.2	-47.8			329.7	584.8	196.5	81.5	1.000073
40000.0	208.4	-49.1			324.0	583.1	196.6	84.0	1.000072
40500.0	203.7	-50.4			318.5	581.5	197.1	85.1	1.000071
41000.0	199.0	-51.6			313.0	579.8	197.5	86.1	1.000070
41500.0	194.3	-52.7			307.1	578.0	197.3	86.9	1.000068
42000.0	189.7	-53.8			301.3	576.5	201.2	87.7	1.000067
42500.0	185.2	-54.9			295.7	575.5	203.9	87.4	1.000066
43000.0	180.9	-56.0			290.1	574.1	207.2	86.5	1.000065
43500.0	176.6	-57.1			284.7	572.7	210.5	84.9	1.000063

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4010.40 FEET MSL
30 SEP. 82
ASCENSION I.O. 24

UPPER AIR DATA
2730220024

TABLE 11
Cont'd

GEODETIC COORDINATES
32-48497 LAT DEG
106-49714 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TN) SPEED KNOTS	INDEX OF REFRACTION
44000.0	172.4	-58.2		279.4	571.2	214.0	1.000062
44500.0	168.3	-59.2		274.2	569.8	217.6	1.000061
45000.0	164.4	-60.3		269.1	568.3	220.9	1.000060
45500.0	160.5	-61.4		264.1	566.9	224.2	1.000059
46000.0	156.6	-62.4		258.8	565.6	226.4	1.000058
46500.0	152.8	-63.3		253.6	564.4	227.7	1.000056
47000.0	149.1	-64.2		248.5	563.2	227.3	1.000055
47500.0	145.4	-64.8		243.0	562.4	225.8	1.000054
48000.0	141.8	-65.4		237.7	561.6	223.8	1.000053
48500.0	138.3	-66.0		232.5	560.8	221.0	1.000052
49000.0	134.9	-66.6		227.5	559.9	218.6	1.000051
49500.0	131.6	-67.2		222.5	559.1	217.2	1.000050
50000.0	128.3	-67.8		217.7	558.3	216.7	1.000048
50500.0	125.1	-68.6		213.0	557.2	217.3	1.000047
51000.0	122.0	-69.3		208.5	556.2	219.3	1.000046
51500.0	118.9	-70.1		204.0	555.1	221.8	1.000045
52000.0	115.9	-70.9		199.7	554.0	224.0	1.000044
52500.0	113.0	-71.2		194.9	553.6	226.0	1.000043
53000.0	110.1	-71.2		190.0	553.6	228.5	1.000042
53500.0	107.3	-71.3		185.2	553.6	226.5	1.000041
54000.0	104.6	-71.3		180.6	553.5	225.8	1.000040
54500.0	102.0	-71.3		176.0	553.5	224.5	1.000039
55000.0	99.4	-69.1		169.7	550.6	223.4	1.000038
55500.0	97.0	-66.7		163.6	559.8	222.7	1.000036
56000.0	94.6	-64.5		157.9	562.7	222.2	1.000035
56500.0	92.3	-63.0		152.9	564.7	221.8	1.000034
57000.0	90.0	-61.5		148.2	560.8	221.3	1.000033
57500.0	87.8	-61.5		144.6	560.8	217.8	1.000032
58000.0	85.7	-61.4		141.1	560.8	212.3	1.000031
58500.0	83.7	-61.4		137.6	560.9	203.8	1.000031
59000.0	81.6	-61.4		134.3	560.9	194.0	1.000030
59500.0	79.7	-61.4		131.0	567.0	187.7	1.000029
60000.0	77.7	-61.3		127.9	567.0	181.6	1.000028
60500.0	75.9	-61.2		124.7	567.1	179.7	1.000028
61000.0	74.1	-60.2		121.2	566.5	177.7	1.000027
61500.0	72.3	-59.2		117.7	569.8	177.2	1.000026
62000.0	70.6	-58.2		114.4	571.1	176.8	1.000025
62500.0	68.9	-57.9		111.5	571.5	176.0	1.000025
63000.0	67.2	-57.9		108.8	571.5	179.3	1.000024
63500.0	65.6	-58.0		106.3	571.5	181.0	1.000024

STATION ALTITUDE 4010.00 FEET MSL
30 SEP. 62 0845 MDT
ASCENSION NO. 24

UPPER AIR DATA
2750240024
NW 30

GEOCLUTIC COORDINATES
32.00497 LAT DEG
106.49714 LON DEG

TABLE 11

Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION SPEED DEGREES (W) KNOTS	INDEX OF REFRACTION
64000.0	64.1	-58.0		103.6	571.5	163.2	1.000023
64500.0	62.6	-57.7		101.2	571.8	177.0	1.000023
65000.0	61.1	-57.2		98.5	572.6	165.6	1.000022
65500.0	59.7	-56.6		95.9	573.4	137.6	1.000021
66000.0	58.2	-56.0		93.4	574.1	108.7	1.000021
66500.0	56.9	-55.6		91.1	574.6	93.0	1.000020
67000.0	55.5	-56.2		89.2	573.8	92.6	1.000020
67500.0	54.2	-56.7		87.3	573.1	94.1	1.000019
68000.0	52.9	-57.3		85.4	572.4	102.5	1.000019
68500.0	51.7	-57.8		83.6	571.7		1.000019
69000.0	50.5	-58.4		81.9	570.9		1.000018
69500.0	49.3	-58.3		79.9	571.1		1.000018
70000.0	48.1	-57.7		77.8	571.8		1.000017

STATION ALTITUDE 4010.00 FEET MSL
30 SEP. 62
ASCENSION NO. 24

MANDATORY ELEMENTS
27302200Z
104 30

TABLE 12

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR	DEWPOINT	PERCENT		DIRECTION	SPEED
		DEGREES	CENTIGRADE			(IN)	KNOTS
850.0	4808.	14.8	11.7	82.		191.7	7.4
800.0	6514.	16.6	11.0	73.		184.4	14.3
750.0	8313.	13.3	8.5	73.		193.1	12.8
700.0	10207.	8.8	5.5	80.		203.7	10.3
650.0	12211.	4.7	3.0	93.		191.1	19.3
600.0	14343.	1.2	.7	90.		181.0	34.5
550.0	16633.	-2.0	-2.4	97.		178.2	48.2
500.0	19108.	-5.5	-6.0	90.		185.2	42.5
450.0	21805.	-9.5	-10.2	95.		194.5	44.6
400.0	24766.	-14.0	-16.5	88.		203.1	42.0
350.0	28044.	-21.1	-23.5	81.		199.1	57.1
300.0	31721.	-29.4	-33.5	67.		203.1	56.2
250.0	35909.	-39.0	-44.0	55.		199.0	60.9
200.0	40797.	-51.4				197.4	65.9
175.0	43604.	-57.5				211.9	63.7
150.0	46748.	-64.0				227.4	74.6
125.0	50374.	-68.6				217.5	73.0
100.0	54716.	-69.6				223.7	53.7
80.0	59218.	-61.4				189.1	25.6
70.0	61950.	-57.0				177.1	22.7
60.0	65141.	-56.7				147.3	7.7
50.0	68932.	-58.6					

STATION ALTITUDE 4010.0 FEET .5L
30 SEP. 62 0845 MDT
ASCENSION NO. 24

UNFOLD AIR DATA
27302,0024
NW 30

TABLE 11
Cont'd

GEOMETRIC COORDINATES
32.00497 LAT DEG
106.49714 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM./CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
04000.0	64.1	-58.0		103.6	571.5	163.2	15.8	1.000023
04500.0	62.6	-57.7		101.2	571.8	177.0	12.1	1.000023
05000.0	61.1	-57.2		98.5	572.6	165.6	8.7	1.000022
05400.0	59.7	-56.6		95.9	573.4	137.6	7.5	1.000021
06000.0	58.2	-56.0		93.4	574.1	106.7	8.5	1.000021
06500.0	56.9	-55.6		91.1	574.6	96.0	10.1	1.000020
07000.0	55.5	-56.2		89.2	573.8	92.8	11.7	1.000020
07500.0	54.2	-56.7		87.5	573.1	94.1	12.4	1.000019
08000.0	52.9	-57.3		85.4	572.4	102.9	12.1	1.000019
08500.0	51.7	-57.8		83.6	571.7			1.000019
09000.0	50.5	-58.4		81.9	570.9			1.000018
09500.0	49.3	-58.3		79.9	571.1			1.000018
70000.0	48.1	-57.7		77.8	571.8			1.000017

STATION ALTITUDE 3912.75 FEET MSL
30 SEP. 82 0930 '00T
ASCENSION, I.O. 98

SIGHTING DATA
273029009
FAI 1-23/000000

GEOMETRIC COORDINATES
32.64927 LAT DEG
136.440591 LONG DEG

TABLE 13

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR	TEMPERATURE DEWPOINT	REL. HUM. PERCENT
MILLIBARS	FEET	DEGREES CENTIGRADE		
876.3	3912.7	17.5	10.9	96.0
873.2	4012.5	16.6	15.0	94.0
850.0	4767.3	15.6	14.0	94.0
806.3	6237.3	13.1	11.8	92.0
700.0	10099.0	5.4	2.6	82.0
641.1	12449.1	1.9	-1.5	78.0
607.3	13679.6	-1.1	-4.0	76.0
583.3	14937.7	-1.5	-4.0	78.0
541.1	16896.4	-4.5	-7.1	82.0
500.0	18936.2	-6.8	-10.2	76.0
430.8	22723.5	-12.6	-10.9	70.0
400.0	24575.0	-16.3	-21.0	67.0
374.6	26193.1	-18.7	-23.6	65.0
340.0	28551.4	-23.1	-28.2	61.0
300.0	31525.3	-30.6	-36.2	57.0
281.6	32995.6	-34.1	-40.1	54.0
250.0	35705.5	-40.2		
234.3	37155.4	-42.7		
225.5	38003.3	-44.5		
223.3	38219.3	-45.1		
200.0	40609.0	-51.8		
173.6	43577.1	-60.1		
167.4	44325.2	-60.1		
150.0	46554.5	-65.5		
144.4	47317.1	-65.7		
134.9	48675.1	-67.4		
121.1	50000.8	-71.1		
104.3	53708.5	-72.2		
100.0	54520.4	-71.1		
72.7	60885.7	-62.7		
70.0	61661.1	-59.9		
57.5	65733.1	-58.4		
50.0	68623.8	-60.4		
45.3	70668.9	-67.8		

GEODLTIC COORDINATES
32.89927 LAT DEG
136.40591 LONG DEG

UPPER AIR DATA
2730290093
EAST-20/CHERRY

STATION ALTITUDE 3912.75 FEET MSL
30 SEP. 82
ASCENSION NO. 98

TABLE 1A

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (DEGREES TRUE)	SPEED KNOTS	INDEX OF REFRACTION
3912.7	876.3	17.5	16.9	96.0	1041.6	660.9	220.0	6.0	1.000318
4000.0	873.6	16.7	15.8	94.2	1041.7	663.9	211.6	6.6	1.000313
4500.0	858.1	16.0	15.0	94.0	1020.3	664.4	185.9	11.3	1.000306
5000.0	842.9	15.2	14.2	93.7	1010.9	664.0	176.1	16.9	1.000299
5500.0	827.9	14.4	13.2	93.0	995.2	662.9	172.1	21.7	1.000292
6000.0	813.2	13.5	12.3	92.3	981.7	661.8	177.3	18.1	1.000285
6500.0	798.6	12.6	11.2	91.3	967.5	660.6	184.2	15.1	1.000277
7000.0	784.1	11.6	10.0	90.0	953.7	659.3	192.6	12.8	1.000270
7500.0	769.9	10.6	8.8	88.7	940.0	658.1	197.0	12.2	1.000263
8000.0	755.9	9.6	7.6	87.4	926.5	656.6	200.3	11.7	1.000256
8500.0	742.2	8.6	6.4	86.1	913.2	655.5	203.4	9.5	1.000249
9000.0	728.7	7.6	5.2	84.8	900.1	654.3	208.4	7.8	1.000243
9500.0	715.5	6.6	4.0	83.6	887.2	653.0	214.8	7.2	1.000237
10000.0	702.5	5.6	2.8	82.3	874.5	651.7	221.1	7.7	1.000231
10500.0	689.6	4.8	1.9	81.3	860.9	650.8	223.4	9.0	1.000226
11000.0	676.8	4.1	1.0	80.5	847.4	649.8	211.0	12.6	1.000221
11500.0	664.3	3.3	.1	79.6	834.1	648.9	200.6	16.2	1.000216
12000.0	652.0	2.6	-.7	78.8	821.0	648.0	191.8	19.9	1.000212
12500.0	639.9	1.8	-1.6	77.9	808.1	647.0	188.5	19.9	1.000207
13000.0	627.9	.7	-2.8	77.2	795.2	645.7	185.9	20.5	1.000203
13500.0	616.1	-.3	-3.9	76.5	782.4	644.4	183.1	24.9	1.000198
14000.0	604.5	-1.1	-4.8	76.2	772.2	643.4	183.1	30.0	1.000194
14500.0	593.1	-1.3	-4.8	77.2	758.1	643.2	179.9	35.8	1.000191
15000.0	581.9	-1.6	-4.9	78.1	744.4	642.9	177.5	38.1	1.000188
15500.0	570.4	-2.4	-5.5	79.1	732.4	641.9	176.1	40.7	1.000184
16000.0	560.0	-3.1	-6.0	80.2	720.6	641.0	176.1	44.8	1.000181
16500.0	549.4	-3.9	-6.6	81.2	709.0	640.1	175.8	49.0	1.000177
17000.0	538.4	-4.6	-7.3	81.7	697.4	639.2	175.2	51.8	1.000174
17500.0	528.6	-5.2	-8.0	80.2	685.5	638.5			1.000170
18000.0	518.5	-5.7	-8.8	78.8	673.9	637.8			1.000167
18500.0	508.5	-6.3	-9.6	77.3	662.4	637.1			1.000163
19000.0	498.7	-6.9	-10.4	75.9	651.2	636.4			1.000160
19500.0	489.0	-7.7	-11.3	75.1	640.4	635.4			1.000157
20000.0	479.5	-8.4	-12.2	74.3	629.8	634.5			1.000153
20500.0	470.2	-9.2	-13.0	73.5	619.4	633.5			1.000150
21000.0	461.0	-10.0	-13.9	72.7	609.2	632.6			1.000147
21500.0	452.0	-10.7	-14.8	71.9	599.1	631.6			1.000144
22000.0	443.2	-11.5	-15.6	71.1	589.2	630.7			1.000141
22500.0	434.6	-12.3	-16.5	70.4	579.5	629.7			1.000138
23000.0	426.1	-13.2	-17.5	69.6	570.1	628.6			1.000136

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

GEOGRAPHIC COORDINATES
32.09927 LAT DEG
136.40591 LON DEG

U.S. DEPT. OF JUSTICE
FEDERAL BUREAU OF INVESTIGATION
WASHINGTON, D.C. 20535

TABLE 14

Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE					
23500.0	417.6	-14.2	-18.6	68.7	561.0	627.4		1.000133
24000.0	409.3	-15.2	-19.7	67.9	552.0	626.1		1.000130
24500.0	401.2	-16.2	-20.8	67.1	543.2	624.9		1.000128
25000.0	393.2	-16.9	-21.7	66.5	534.0	623.9		1.000125
25500.0	385.3	-17.7	-22.5	65.9	524.8	623.0		1.000123
26000.0	377.5	-18.4	-23.3	65.2	515.6	622.1		1.000120
26500.0	369.9	-19.3	-24.2	64.5	507.1	621.0		1.000118
27000.0	362.4	-20.2	-25.3	63.7	498.7	619.8		1.000116
27500.0	355.0	-21.1	-26.3	62.8	490.4	618.7		1.000113
28000.0	347.8	-22.1	-27.4	61.9	482.2	617.5		1.000111
28500.0	340.7	-23.0	-28.4	61.1	474.2	616.4		1.000109
29000.0	333.6	-24.2	-29.7	60.4	466.7	614.8		1.000107
29500.0	326.7	-25.5	-31.0	59.7	459.3	613.2		1.000105
30000.0	319.9	-26.8	-32.3	59.1	452.1	611.7		1.000103
30500.0	313.2	-28.0	-33.6	58.4	444.9	610.1		1.000101
31000.0	306.7	-29.3	-34.9	57.7	438.0	608.5		1.000100
31500.0	300.3	-30.5	-36.2	57.0	431.1	606.9		1.000098
32000.0	293.9	-31.7	-37.5	56.0	424.0	605.4	189.6	1.000096
32500.0	287.7	-32.9	-38.8	55.0	417.0	603.9	115.0	1.000094
33000.0	281.5	-34.1	-40.1	53.9**	410.2	602.4	93.1	1.000093
33500.0	275.4	-35.2	-43.1	43.9**	403.2	601.0	84.4	1.000091
34000.0	269.4	-36.4	-46.5	34.0**	396.4	599.5	76.6	1.000089
34500.0	263.6	-37.5	-50.5	24.0**	389.6	598.1	74.6	1.000087
35000.0	257.9	-38.6	-55.9	14.1**	383.0	596.6	72.9	1.000086
35500.0	252.3	-39.7	-66.1	4.1**	376.5	595.2	74.0	1.000084
36000.0	246.7	-40.7			369.8	594.0	75.2	1.000082
36500.0	241.3	-41.6			362.9	592.9	77.1	1.000081
37000.0	235.9	-42.5			356.2	591.7	78.9	1.000079
37500.0	230.7	-43.4			349.8	590.5	81.2	1.000078
38000.0	225.5	-44.5			343.9	589.1	83.5	1.000077
38500.0	220.4	-45.9			337.9	587.5	86.5	1.000075
39000.0	215.4	-47.3			332.2	585.5	89.5	1.000074
39500.0	210.5	-48.7			326.7	583.7	91.3	1.000073
40000.0	205.7	-50.1			321.3	581.6	93.2	1.000072
40500.0	201.0	-51.5			315.9	580.0	94.5	1.000070
41000.0	196.3	-52.9			310.5	578.2	95.9	1.000069
41500.0	191.7	-54.3			305.1	576.3	98.6	1.000068
42000.0	187.2	-55.7			299.8	574.5	101.3	1.000067
42500.0	182.8	-57.1			294.7	572.6	104.3	1.000066
43000.0	178.4	-58.5			289.6	570.8	106.5	1.000064

*** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

XXXXX MISSING DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3912.75 FEET MSL
30 SEP. 82 0930 MDT
ASCENSION ID. 9H

UPPER AIR DATA
2730290090
EAST-28/CULINARY

GEODETIC COORDINATES
32.0927 LAT DEG
136.40591 LONG DEG

TABLE 14

Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
43500.0	174.2	-59.9		284.6	568.9	197.4	106.3	1.000063
44000.0	170.1	-60.1		276.1	563.6	200.8	104.7	1.000062
44500.0	166.0	-60.5		271.9	560.1	205.6	99.7	1.000061
45000.0	161.9	-61.7		266.8	556.5	210.6	95.6	1.000059
45500.0	158.0	-62.9		261.8	554.8	215.6	92.5	1.000058
46000.0	154.2	-64.2		256.9	553.2	218.1	94.0	1.000057
46500.0	150.4	-65.4		252.2	551.6	219.6	96.5	1.000056
47000.0	146.7	-65.6		246.5	551.2	219.7	98.2	1.000055
47500.0	143.1	-65.9		240.5	550.8	219.4	98.4	1.000054
48000.0	139.5	-66.6		235.3	550.0	218.6	97.6	1.000052
48500.0	136.1	-67.2		230.2	559.1	217.6	95.9	1.000051
49000.0	132.7	-68.0		225.3	556.0	216.7	96.2	1.000050
49500.0	129.4	-68.8		220.6	556.9	215.4	99.2	1.000049
50000.0	126.1	-69.7		216.0	555.7	214.8	103.1	1.000048
50500.0	123.0	-70.6		211.5	554.5	214.7	104.8	1.000047
51000.0	119.9	-71.2		206.7	553.7	216.0	98.7	1.000046
51500.0	116.8	-71.4		201.7	553.4	218.1	90.3	1.000045
52000.0	113.9	-71.6		196.8	553.1	221.1	80.3	1.000044
52500.0	111.0	-71.7		192.0	552.9	224.4	73.0	1.000043
53000.0	108.2	-71.9		187.3	552.6	227.9	65.9	1.000042
53500.0	105.4	-72.1		182.7	552.4	230.5	58.2	1.000041
54000.0	102.8	-71.8		177.3	552.8	232.7	50.3	1.000040
54500.0	100.1	-71.1		172.7	553.7	235.1	42.1	1.000038
55000.0	97.7	-70.5		167.9	554.6	240.1	34.5	1.000037
55500.0	95.2	-69.8		163.2	555.5	243.7	27.6	1.000036
56000.0	92.9	-69.2		158.6	556.4	251.6	21.9	1.000035
56500.0	90.6	-68.5		154.2	557.3	249.4	19.0	1.000034
57000.0	88.3	-67.8		149.9	558.2	237.7	19.1	1.000033
57500.0	86.2	-67.2		145.7	559.1	221.5	22.2	1.000032
58000.0	84.0	-66.5		141.6	560.0	208.9	27.1	1.000032
58500.0	81.9	-65.9		137.7	560.9	196.8	32.3	1.000031
59000.0	79.9	-65.2		133.9	561.8	189.7	37.1	1.000030
59500.0	77.9	-64.5		130.1	562.7	187.1	39.2	1.000029
60000.0	76.0	-63.9		126.5	563.6	185.3	36.3	1.000028
60500.0	74.1	-63.2		123.0	564.5	183.5	30.7	1.000027
61000.0	72.3	-62.5		119.4	565.7	177.9	26.0	1.000027
61500.0	70.6	-60.5		115.6	568.1	173.1	22.9	1.000026
62000.0	69.9	-59.8		112.4	569.1	172.3	21.7	1.000025
62500.0	67.2	-59.6		109.7	569.5	176.2	18.9	1.000024
63000.0	65.6	-59.4		106.9	569.6	183.5	15.2	1.000024

STATION ALTITUDE 5412.75 FEET MS
30 SEP. 62 0930 MNT
ASCENSION NO. 98

UPPER AIR DATA
273029096
FAST-25/CHELSEA
TABLE 14
Cont'd

GEODETIC COORDINATES
32°49'27" LAT DEG
136°40'59" LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KI/MS	WIND DATA DIRECTION SPEED KI/MS	INDEX OF REFRACTION
63500.0	64.0	-59.2		104.3	569.0	188.0	1.000023
64000.0	62.5	-59.0		101.7	570.1	2.9	1.000023
64500.0	61.0	-58.9		99.2	570.3	13.9	1.000022
65000.0	59.6	-58.7		96.8	570.5	17.9	1.000022
65500.0	58.2	-58.5		94.4	570.6	22.8	1.000021
66000.0	56.8	-58.6		92.2	570.7	30.7	1.000021
66500.0	55.4	-58.9		90.1	570.2	47.4	1.000020
67000.0	54.1	-59.3		88.1	569.7	90.1	1.000020
67500.0	52.8	-59.6		86.1	569.3	140.6	1.000019
68000.0	51.5	-60.0		84.2	568.0	154.0	1.000019
68500.0	50.3	-60.3		82.3	568.4	150.2	1.000018
69000.0	49.1	-59.9		80.2	568.9	120.4	1.000018
69500.0	47.9	-59.3		78.1	569.7		1.000017
70000.0	46.8	-58.7		76.0	570.6		1.000017
70500.0	45.7	-58.0		74.0	571.4		1.000016

STATION ALTITUDE 3912.75 FEET MSL
30 SEP. 62
ASCENSION, MO. '98

LABORATORY LEVELS
2730200000
165T-20/CHEMP
TABLE 15

GEODETLIC COORDINATES
32.89927 LAT DEG
136.40591 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
HILLIARS	FEET	ALP	GEOMETRIC	PERCENT		DIRECTION	SPEED
		DEGREES	CENTIGRADE			(TH)	KNOTS
850.0	4764.	15.6	14.6	94.		179.7	14.2
800.0	6450.	12.7	11.3	91.		183.5	15.3
750.0	8222.	9.2	7.1	87.		201.5	10.7
700.0	10090.	5.4	2.6	82.		222.1	7.9
650.0	12070.	2.4	-2.9	79.		190.9	20.3
600.0	14181.	-1.2	-4.8	77.		181.6	32.2
550.0	16452.	-3.8	-6.6	81.		175.8	46.7
500.0	18910.	-6.8	-10.3	76.		9999.0XX	
450.0	21591.	-10.9	-15.0	72.		9999.0XX	
400.0	24535.	-16.3	-21.0	67.		9999.0XX	
350.0	27801.	-21.8	-27.0	62.		9999.0XX	
300.0	31463.	-30.6	-36.3	57.		9999.0XX	
250.0	35628.	-46.2				200.4	74.5
200.0	40512.	-51.8				193.8	94.7
175.0	43302.	-56.6				190.8	100.3
150.0	46430.	-65.5				219.6	96.6
125.0	50037.	-70.0				214.6	104.4
100.0	54361.	-71.1				235.1	42.1
80.0	58757.	-65.2				190.2	36.8
70.0	61451.	-59.6				172.9	22.6
60.0	64619.	-58.7				15.7	19.7
50.0	68367.	-60.4				153.4	16.0

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

DATED
LME
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